

### REMARKS

Reconsideration and withdrawal of the objections and rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 13-28 and 37-40 are now pending in the application, with Claims 13, 16 and 37 being independent. Claims 1-12, 29-36 and 41-44 have been cancelled without prejudice. Claims 13, 16, 18, 19, 21, 22, 24, 25, 27, 28 and 37-40 have been amended herein.

Applicant respectfully requests that acknowledgement be made of the claim for foreign priority. Foreign priority was claimed in the Combined Declaration and Power of Attorney filed with the original application on June 21, 2001. A certified copy of the priority document was filed with a Submission of Priority Document on March 11, 2002. It is respectfully requested that acknowledgement of the claim to foreign priority and of receipt of the priority document be made with the next office communication.

Applicant notes with appreciation the indication that Claims 13-28 are allowed. Several of these claims have been amended merely to improve their form. These changes do not affect the scope of the claims and have not been made for any reasons related to patentability. Accordingly, Claims 13-28 are believed to remain in condition for allowance.

Claims 7-12 were objected to for being dependent upon rejected base claims. These claims have been cancelled without prejudice.

Claims 30-32, 34, 38-40 and 42-44 were objected to for a minor informality. Of these claims, only Claims 38-40 remain pending and Claim 38 has been amended along the lines suggested by the Examiner. Reconsideration and withdrawal of this objection to the claims are requested.

Claims 29-44 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly not being enabled by the description. In particular, the Examiner suggested that Claims 29, 33, 37 and 41 are not directed to manufacture of a conveying roller, but rather of a scale provided coaxial with the conveying roller. Of these four claims, only Claim 37 remains pending. Claim 37 has been rewritten in independent form and is not directed to the manufacture of a conveying roller. Accordingly, reconsideration and withdrawal of the § 112, first paragraph, rejection are requested.

Claims 1-6, 29, 33, 35-37 and 41 were rejected under 35 U.S.C. § 103. Of these claims, only Claim 37 remains pending and that claim has been rewritten in independent form and includes the steps of allowed Claim 13. Thus, independent Claim 37 is also believed to be allowable and reconsideration and withdrawal of the § 103 rejections are requested.

For the foregoing reasons, Applicant respectfully submits that the present invention is patentably defined by Claims 13-28 and 37-40 and that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

  
Attorney for Applicant

Registration No. 33,628

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200  
MAW\lnt



Application No. 09/885,013  
Attorney Docket No. 83500.015470

RECEIVED  
OCT 18 2002  
TECHNOLOGY CENTER 2800

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The paragraph starting at page 9, line 8 has been amended as follows.

Examples of the recording methods utilizing energy generating means for generating such energy include a recording method using an electromechanical converter, such as a piezoelectric element, a recording method using an energy generating means which generates heat through application of an electromagnetic wave of a laser or the like and which causes liquid droplets to be discharged by the action due to the heat generation, and a recording method using an energy generating means which heats a liquid by an [electromechanical] electrothermal converter, such as a heat generating element having a heat generating resistor, to cause liquid to be discharged.

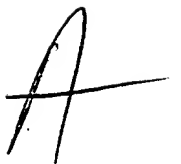
The paragraph starting at page 9, line 20 has been amended as follows.

In particular, the recording head used in the ink-jet recording method in which liquid is discharged by heat energy allows liquid discharge holes (orifices) for discharging recording liquid to form discharge droplets to be arranged at high density, so that it is capable of performing high resolution recording. In particular, the recording head using an [electromechanical] electrothermal converter as the energy generating means is advantageous in that it can be easily reduced in size, that it can sufficiently utilize the advantages of the IC technology and the microprocessing technology, which have recently

A

advanced and been improved remarkably in the field of semiconductor technology, that it easily allows high density mounting, and that it can be produced at low cost.

MAW\tnr

A handwritten signature, possibly 'A', is located in the bottom right corner of the page.

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

13. (Amended) A method for producing a scale provided coaxially and integrally with a conveying roller and adapted to detect a conveyance rotation angle, the method comprising the steps of:

integrating the conveying roller with a conveyance angle detection pattern writing member coaxially mounted with the conveying roller; and

holding a recording medium conveyance outer peripheral portion of the [conveyance] conveying roller integrated with the conveyance angle detection pattern writing member, and performing rotation angle allotment on the conveying roller to form a scale for detecting the conveyance rotation angle.

16. (Amended) A method for producing a scale for detecting a conveyance rotation angle of a conveying roller provided in a recording apparatus adapted to perform recording on a recording medium conveyed while being held between the conveying roller and a driven roller by using [a] recording means, the method comprising the steps of:

integrating the conveying roller with a conveyance angle detection pattern writing member coaxially mounted with the conveying roller; and

holding a recording medium conveyance outer peripheral portion of the [conveyance] conveying roller integrated with the conveyance angle detection pattern

A

writing member, and performing rotation angle allotment on the conveying roller to form a scale for detecting the conveyance rotation angle.

18. (Amended) A method according to Claim 16 or 17, wherein the recording apparatus is an ink-jet recording apparatus which forms an image on the recording medium by discharging ink onto [it] the recording medium.

19. (Amended) A method according to Claim 18, wherein the [recording apparatus is an] ink-jet recording apparatus is provided with an electrothermal converter for generating energy for discharging the ink.

21. (Amended) A method according to Claim 20, wherein the recording apparatus is an ink-jet recording apparatus which forms an image on the recording medium by discharging ink onto [it] the recording medium.

22. (Amended) A method according to Claim 21, wherein the [recording apparatus is an] ink-jet recording apparatus is provided with an electrothermal converter for generating energy for discharging the ink.

24. (Amended) A method according to Claim 23, wherein the recording apparatus is an ink-jet recording apparatus which forms an image on the recording medium by discharging ink onto [it] the recording medium.

25. (Amended) A method according to Claim 24, wherein the [recording apparatus is an] ink-jet recording apparatus is provided with an electrothermal converter which generates energy for discharging the ink.

27. (Amended) A method according to Claim 26, wherein the recording apparatus is an ink-jet recording apparatus which forms an image on the recording medium by discharging ink onto [it] the recording medium.

28. (Amended) A method according to Claim 27, wherein the [recording apparatus is an] ink-jet recording apparatus is provided with an electrothermal converter which generates energy for discharging the ink.

37. (Amended) A recording apparatus comprising[:] conveying means having a conveying roller [manufactured by a method as defined in claim 13] and a pinch roller in [a] close contact with said conveying roller, [;] and detecting means for detecting a rotational angle of said conveying means, wherein a recording medium conveyed by said conveying means is recorded by recording means, said recording apparatus being manufactured by the steps of:

integrating the conveying roller with a conveyance angle detection pattern writing member coaxially mounted with the conveying roller; and

holding a recording medium conveyance outer peripheral portion of the conveying roller integrated with the conveyance angle detection pattern writing member,





and performing rotation angle allotment on the conveying roller to form a scale for detecting the conveyance rotation angle.

38. (Amended) A recording apparatus according to claim 37, wherein said detecting means is biased to a magnetic scale of said conveying means to maintain a distance to said [recording] conveying means constant [in a recording medium conveying direction].

39. (Amended) A recording apparatus according to claim [38] 37, wherein said recording apparatus is an ink jet recording apparatus for discharging ink on the recording medium to form an image.

40. (Amended) A recording apparatus according to claim 39, wherein said [recording apparatus is an] ink jet recording apparatus [having] comprises an electrothermal converting member for generating energy utilized to discharge the ink.

MAW\ntnt

DC\_MAIN 112434 v 1